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Paphiopedilum xdeleonii

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from northern Mindanao, Philippines**

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Summary: A new natural hybrid of *Paphiopedilum*
is described as *Paphiopedilum* × *deleonii*

Keywords: Phillipines, *Paphiopedilum* × *deleonii*

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A new natural hybrid in the genus *Paphiopedilum* from northern Mindanao, Philippines

Derek CABACTULAN, Jim COOTES, Reynold PIMENTEL & Ibn DIONISIO

Abstract: A recent discovery by Miguel David DE LEON, in northern Mindanao has revealed what has proven to be a natural hybrid between *Paphiopedilum adductum* ASHER (1983) and *Paphiopedilum haynaldianum* var. *laurae* GOLAMCO (2002). We take this opportunity to name this natural hybrid as *Paphiopedilum* × *deleonii*, in his honour.

Discussion: Hybridization in the wild is a relatively rare phenomenon. To date, only two natural Philippine *Paphiopedilum* hybrids are known, *Paphiopedilum* × *expansum* and *Paphiopedilum* × *mindanaense*. For natural hybridization to occur, parent species must bloom synchronously and be accessible to the pollinators. For the population of *Paphiopedilum* × *deleonii* plants documented in bloom, both

putative parents, *Paphiopedilum adductum* and *Paphiopedilum haynaldianum* var. *laurae* were simultaneously flowering. Field work by the first author and Miguel David DE LEON have shown that *Paphiopedilum adductum* is widely spread within its range, from NE to central to SE Mindanao, from 500 to 1,300 m. *Paphiopedilum haynaldianum* var. *laurae* has a more restricted range with far fewer individuals, from northern to central Mindanao, at elevations of 1,100 to 1,300 m.

Paphiopedilum* × *deleonii D. CABACTULAN, COOTES, PIMENTEL & DIONISIO **nat. hyb. nov.**

Subgenus: ***Paphiopedilum*** sensu CRIBB 1987. The natural hybrid is between two sections: § ***Pardalopetalum*** HALLIER & PFITZER (1903) and § ***Coryopedilum*** PFITZER (1903).

TYPE: From cultivation. **PHILIPPINES**, Bukidnon, at 1,300 metres elevation above sea level. **MDL1903001**

PLANT DESCRIPTION

Growth Habit: Lithophytic, upright, sympodial, forming clumps. **Stems:** subsessile **Leaves:** leathery, oblong, apex emarginate, minutely dentate, base truncate, conduplicate, margins entire, alternate and overlapping each other, adaxially and abaxially glabrous; midvein adaxially canaliculate and abaxially narrowly raised, veins adaxially faint or less tessellated, dark green, and abaxially absent, pale green; up to 8 leaves, 8 to 34.6 cm long and 3 to 5 cm wide. **Inflorescence:** upright, long, terminal, bearing up to 6 flowers, flower dimension 9.1 cm wide across the petals and 15.5 cm tall from the dorsal sepal to the tips of the petals. **Floral bracts:** broadly ovate, persistent, conduplicate, puberulent, 3.5 to 6.2 cm long and 1.6 to 3 cm wide when flattened, 9-nerved, base color yellow green, veins campylodromous, veins purple. **Flower color:** Pe-



Paphiopedilum adductum

Foto: © J. COOTES

*Paphiopedilum xdeleonii*

tals base color yellow, half of the entire length is pink to purplish red, veins and rounded spots dark purple; dorsal sepal base color yellow green, central base partially solid dark purple, veins and rounded spots dark purple; synsepalum base color yellow green, veins dark purple; labellum base color brownish yellow, veins dark purple. **Peduncle and rachis:** long, thickened, terete, porrect, dark purple, densely hirsute, 7 cm long by 5 mm in diameter. **Pedice and ovary:** oval, dark purple, slightly curved and grooved, densely hirsute, 8 cm long by 3 mm in diameter from the base of the peduncle and 2.5 mm in diameter from the base of the sepals. **Dorsal sepal:** fleshy, ovate, flattened at the central base and curved towards the apex, broadly undulate; ninety degree angle position from the pedicel and ovary; slightly involute half of the length towards the apex, margins ciliate, adaxially sparsely puberulent and

abaxially puberulous; 7-nerved, veins campylodromous, thinner at the base and towards the apex, and thickened about two-thirds of the entire length at the interior, prominent spots unevenly distributed one-thirds from the base, aligned in the veins; base obtuse, apex acute-acuminate, revolute, 6 cm long by 3 cm wide. **Petals:** fleshy, lanceolate, flattened, undulate half of the length, margins ciliate, adaxially puberulent and abaxially puberulous, 7-nerved, base truncate, apex acute-acuminate, 10.7 cm long by 9 mm wide. **Synsepalum:** fleshy, ovate, flattened at the central base and curved; 45 degree angle position from the pedicel and ovary; involute half of the length towards the apex, margins entire, adaxially sparsely puberulent and abaxially puberulous; 8-nerved, veins thinned, campylodromous; apex acute-acuminate, base obtuse, slightly revolute, 6.5 cm long by 2.8 cm wide. **La-**

bellum: is trilobed, urceolate, campylodromous-reticulate, densely pubescent from the interior of the base of the column, puberulent from the exterior of the base towards the lateral lobes, hairs light brown, 45 degree angle position from the pedicel and ovary, 3.9 cm long from the base of the column to the lower midlobe by 2 cm in diameter; lateral lobes are fully revolute at the central interior of the labellum, narrowly triangular, margins entire, 2.1 cm long from apex to the base of the column, 1.4 cm long from apex to the base of the midlobe, 1 cm wide; midlobe is truncate-sinuate when flattened, margins entire, 1.8 cm long from central apex to the central base of midlobe, 1.8 cm long from apex lateral margin to the central base of midlobe, 1 cm at its widest point. **Column:** short, cylindrical, porrect, ciliate, densely setose at the base, 6 mm long by 2.5 mm wide; staminode ovate, concave, ante-

riorly bifid, a short-raised keel in the posterior adaxial, abaxially keeled and prominently short-fanged at the apex, margins densely pubescent, with uneven distribution of white spots interiorly, 12 mm long by 7 mm wide. **Anthers:** two, bilocular, acute filaments, pollinia spherical, viscid, 1 mm in diameter. **Stigma:** subsessile, trilobed, ovate, convex, 8 mm long by 6 mm wide. Inflorescence: not seen.

Comparison: *Paphiopedilum* × *deleonii* is a natural hybrid between *Paphiopedilum adductum* and *Paphiopedilum haynaldianum* var. *laurae*. This natural hybrid shares features from the two species but differs in overall morphological aspects. The leaf venation in *P. × deleonii* is less tessellated to obscure, whereas it is prominently tessellated in *P. adductum* and absent in *P. haynaldianum* var. *laurae*. The inflorescence of *P. × deleonii* is upright and porrect, whereas in *P. adductum* is porrect and semi-pendulous and *P. haynaldianum* var. *laurae* is semi-pendulous. The dorsal sepal in *P. × deleonii* is narrowly ovate, slightly undulate in the lower half of length and involute in the upper half of the length, whereas in *P. adductum* is broadly ovate, concave and in *P. haynaldianum* var. *laurae* is ovate, half revolute in the lower half of length and half involute in the upper half of the length. The petals in *P. × deleonii* is linear-lanceolate, falcate, undulate in the upper half of length, whereas in *P. adductum* is linear, falcate, slightly undulate in the upper half of length and in *P. haynaldianum* var. *laurae* is spatulate. The synsepalum in *P. × deleonii* is narrowly ovate, involute in the upper half of the length, whereas in *P. adductum* is broadly ovate, concave and in *P. haynaldianum* var. *laurae* is ovate and flattened curved. The staminode in *P. × deleonii* is ovate, concave, anterior margins densely pubescent, prominently fanged in the lower anterior apex, entire length is 90° angled, whereas in *P. adductum* is ovoid, anterior margins densely tomentose, entire length is horizontally oriented and in *P. haynaldianum* var. *laurae* is broadly ovate, flattened, keeled in the base, glabrous, entire length is horizontally oriented. The column in *P. × deleonii* is long, cylindrical, dense-

ly setose, whereas in *P. adductum* is short, setose in the lower base, and in *P. haynaldianum* var. *laurae* is short, pubescent in the lower base. The stigma in *P. × deleonii* is convex, curved, whereas in *P. adductum* is thickened convex, and in *P. haynaldianum* var. *laurae* is flattened, extremely curved towards the base of the staminode.

Distribution: *Paphiopedilum* × *deleonii* is only known from the province of Bukidnon, Mindanao, Philippines.

Etymology: This rare beautiful natural hybrid is named after Miguel David De LEON, vitreoretinal surgeon, plant and wildlife conservationist.



Photo: © M.D. DE LEON

Paphiopedilum x deleonii



Paphiopedilum haynaldianum
var. *laurae*

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